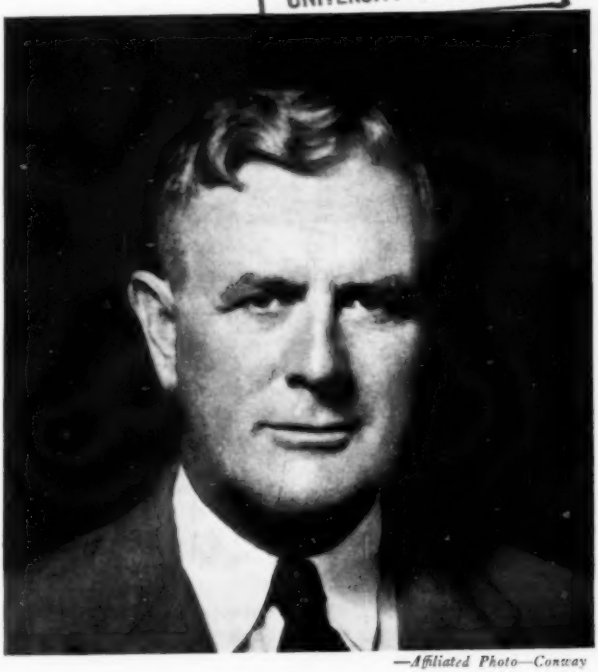
THE CHEMIST

JULY 1948 VOLUME XXV, No. 7



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The Chemist

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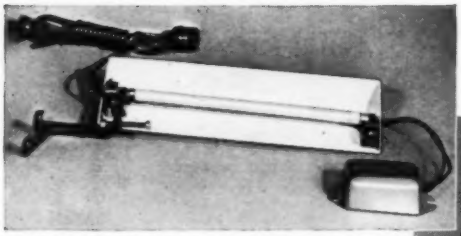
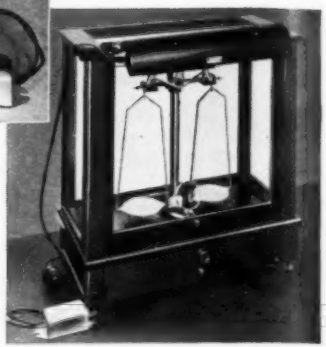
Cover Picture

Dr. Raymond E. Kirk, newly elected vice president of The American Institute of Chemists, was born in Nebraska in 1890. He received the B. S. degree from the University of Nebraska; the M. S. degree from Iowa State, and the Ph. D. degree from Cornell University. He has also studied at the Universities of Minntsota and Chicago. His teaching experience includes positions at the Universities of Minnesota, Cornell, and Montana State College. In 1931, he joined the faculty of the Polytechnic Institute of Brooklyn. He is author or editor of many technical publications.

Scheduled For Later Issues

Committees, 1948-49
Annual Reports—(Continued)
The Question—the Answers, (Continued)
Has the Chemist's Professional Status Improved?
"Biochemistry in the Service of the Food Industry," by Dr. Lloyd K. Riggs, F.A.I.C.
"The Influence of the Technical Man in Society," by Dr. Otto Eisenschiml, F.A.I.C.
"The Future Role of the Analytical Chemist," by Dr. Walter J. Murphy, F.A.I.C.
"Visit to a Flax Paper Mill."
Other material.





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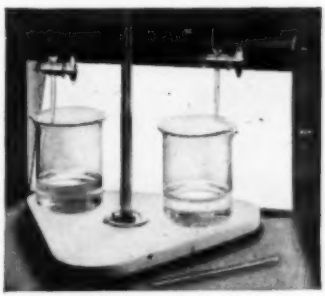

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What Does the Chemist Do For Industry?

Dr. Foster D. Snell, F.A.I.C.

Retiring president, The American Institute of Chemists

(Presented at the A.I.C. Silver Anniversary Meeting.)

THE concept within a company of the function of the chemist grades upward by a series of stages somewhat as follows:

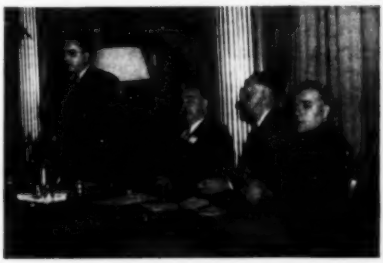
1. He creates a lot of stinks and plays around with strange forms of glassware. This one is as a complete nonessential.

2. He analyzes things we buy and sell by application of his mysterious alchemy. This makes him a form of policeman or inspector, a role supervised by but seldom performed by graduate chemists.

3. He buries himself in a research laboratory and every few years comes up with something new and different but not necessarily revolutionary or economic. This as a concept of research represents some researchers but not all by a long ways.

4. He runs the laboratory which helps to (a) keep manufacturing out of trouble, (b) get manufacturing out of trouble when it does get into it, and (c) keeps our company up with or ahead of its competitors. Here we begin to have a balanced viewpoint on the diverse activities of the chemist.

5. By the magical manipulation of his glassware he creates new things,



—CHEM. & ENG. NEWS.

Speakers at Silver anniversary Meeting L. to R.: Charles C. Wilson; Standing, W. T. Nichols; Dr. Foster D. Snell; E. Lawrence Chandler, and Dr. W. A. Mosher.

so that one need only go to him and cite a problem on Monday morning and by Friday noon a complete solution will be ready. If not, get a new chemist. Here we have gone beyond the abilities or function of a chemist to the concept of alchemy.

6. He is the man who creates everything the company sells. This concept ignores his integrated function in a fabric which must also take account of finance, construction of buildings and equipment, manufacturing, shipping, sales, purchasing, advertising, and whatnot, yes even including the patent attorney and the legal staff and the bottle washer and

floor sweeper who also perform essential functions.

The functions of the chemist are complex. Recognizing that all classifications are faulty, let us try this one:

1. Supervision of analytical control
2. Analytical research and development
3. New Product research
4. Use research on new products
5. Manufacturing supervision

The misconceptions are not confined to the nonchemist. Far too often the recent graduate has grandiose views of what he can and may do the first few weeks or months. One sometimes wonders if they appreciate that with forty years of useful life ahead of them, not everything will be accomplished the first week.

Actually, each chemist is a human being with all the peculiarities associated therewith. The INSTITUTE is endeavoring to guide those chemists in the study of their working conditions. Time only permits me to outline the topics which are discussed for such guidance in a report of the Committee on Employer-Employee Interrelations.

1. What is the policy as to starting salary, base pay, overtime, scheduled hours, etc?

2. What is the median rate of base pay of chemists after five years and ten years? That is more important than where they start.

3. Are increases systematic or individual, and in the latter case who decides? Thus one determines whether chemists are factory workers or professionals in that organization.

4. Is advancement internal or are outsiders brought in for top jobs? This is a basis for looking down the road.

5. How stable is the company? Has it a good or bad record in handling scientific personnel in the past, or is it a new company to be considered as an outright gamble? If you gamble, you at least ought to recognize it as that.

6. What is the policy on retaining older employees? A tough policy may sound good in terms of openings for a young man, but later he, too, will get old.

7. Are chemists under contract and if so what are the terms, particularly of severance? That is like looking for the fire exits when you enter a theatre.

8. What is the physical condition of the laboratory? One can hardly be happy in unpleasant surroundings.

9. What is the policy on vacations and sick leave? One needs a vacation at least once a year and sickness is inevitable.

10. Is a pension plan offered? If so, what is contributed by employer and employee? At age twenty-five it is hard to visualize age sixty-five, but it comes, it comes along.

11. Are group health, life, accident, and hospitalization plans of-

fered? The point is debatable as to whether they should be, but the chemist ought to know.

12. Does the company maintain medical service for its employees commensurate with their location and needs? Usually it has to.

13. What is the policy on attendance at scientific meetings? A man should grow by such attendance. On the other hand, if he rarely attends local meetings, his request for expenses to one in San Francisco is a bit raw.

14. Is publication of work permitted, even encouraged? Policies differ widely on this.

15. Are ideas encouraged? Some accusations of their being gobbled up by superiors have been heard.

16. Does the company encourage and even sponsor further training for its employees? That is desirable but unattainable in many small places.

17. Are adequate library facilities available and used? This can be of tremendous importance.

18. Is there a time clock? Perhaps more important is to say how is promptness and full attendance recognized?

19. Are living conditions suitable for the chemist's family?

20. And finally, are recreational facilities available which will provide for the chemist and his family? People can be very unhappy in uncongenial surroundings.

That is only an outline of what the INSTITUTE thinks is needed by the professional man in deciding to accept and retain any particular employment. The INSTITUTE stands for the chemist to be treated as an individual, not as one of a herd. That is the essence of treatment as a professional man.

Oil Chemists' Society Elects

The American Oil Chemists' Society at its thirty-ninth annual meeting in New Orleans in May, elected the following officers: President, C. P. Long, Proctor and Gamble Company, Cincinnati; First vice-president, V. C. Mehlenbacher, Swift and Company, Chicago; Second vice-president, G. A. Crapple, Wilson and Company, Chicago; Third vice-president, J. R. Mays, Jr., Barrow-Agee Laboratories, Memphis; Fourth vice-president, L. B. Parsons, Lever Brothers Company, Chicago; Treasurer, J. J. Vollertsen, retired chief chemist, Armour and Company, Chicago.

R. T. Milner of the Northern Regional Research Laboratory, Peoria, Illinois, was appointed editor of the *Journal* of the Society to succeed Mr. Roschen.

Turner With Arthur D. Little

Wendell P. Turner, Jr., M.A.I.C., is now with Arthur D. Little, Inc. Cambridge, Massachussetts.

What the Electrical Engineers Offer Their Members

C. C. Wilson

Assistant to Secretary, American Institute of Electrical Engineers

(Presented at the A.I.C. Silver Anniversary Meeting.)

THE A.I.C. should be commended for making it a part of this annual meeting to inquire into the professional aspects of technical men. We should ask ourselves now and then, "What are the technical societies offering to the younger engineer?" or, obversely, "Why should the younger man of science affiliate himself with a technical society?". This kind of self-inquiry is sure to have potential benefits in two directions—to the society in reviewing and rededicating its objectives and to the members and prospective members in answering their own every-ready question. It is becoming next to impossible now-a-days for the ordinary man to ignore his professional activities and rely solely upon his formal training plus whatever haphazard broadening his daily work may add.

I should like to define my use of the words, professional welfare or professional status.

The Merriam Webster dictionery defines the word "professional" as "characteristic of, or conforming to the technical or ethical standards of calling, in which one professes to have acquired some special knowledge used by way of guiding or advising others or of serving them in some art." It was gratifying indeed to find that Mr. Webster agreed with my own interpretation. Note that the definition stresses technical knowledge in two places. Also, it casually hints that you do *your own professing*.

I submit to you that if the American Institute of Electrical Engineers or any similar single society can succeed in making it possible,

(a) to add to one's technical knowledge

(b) to provide opportunities for practice in getting knowledge across to others and, in doing this

(c) to increase one's acquaintance among men in the same and related fields

it cannot further expect to aid professional status.

Many engineers, especially those on the lower rungs of the job ladders would like to read into the obligation of the societies that of pushing them one and all up into respect and pres-

tige of a "profession." The resume which I shall give you of AIEE activities is not designed to prove that the Institute does this.

As far back as 1884, when the AIEE was started, its founding fathers included professional standing in its objective, stating that the Institute "should advance the theory and practice of electrical engineering and of the allied arts and sciences and maintain a high professional standing among its members." I feel sure that in this statement, over sixty years ago, those men meant their reference to professional standing to be interpreted as I have suggested. From their statement and from its activities to date, it is to be correctly inferred that the AIEE is fundamentally a technical society. Its only means for enhancing the professional status of its members is to effect the advancement of the theory and practice of electrical engineering among those members.

In order to approach with some degree of order our question of "What does the AIEE offer its Members and Potential Members"? Suppose we follow the career of an AIEE member from Student to Fellow Grade.

Membership

As far back as 1902, provisions for the enrollment of students and for the formation of student branches were made. Any undergraduate or graduate student of an accredited university is eligible for enrollment as an AIEE Student Member and at a fee per year very moderate compared with dues for Associate Grade. This Student enrollment brings with it the following privileges which are important to technical and professional growth.

(1) Receipt of the official monthly publication, *Electrical Engineering*, giving general articles on engineering and related subjects; abstracts of technical papers presented at General and District meetings; news of Institute activities and other societies. An important part of this letter is the publishing of biographies and news of prominent men in this branch of engineering.

(2) Opportunity to purchase at a reduced price the official *Transactions* of the AIEE, containing the full text and discussion of formal technical papers presented during the year.

(3) Opportunity to participate in the local Student Branch in an administrative or technical capacity. There is no ability that will be of greater value to the student in the future than that of standing before an audience and presenting his ideas clearly and convincingly. Properly conducted Branch

meetings offer ideal opportunities for developing just such ability.

Administration of the Student Branch is almost entirely in the hands of the students who help make up the Executive Committee and the operating committees.

Each Student Branch is provided with a Counselor from the faculty, of that university, who is appointed by the AIEE president. This insures that continuity for that branch is provided.

Not the least of the advantages of student affiliation is the opportunity to come into actual contact with men who are prominent in their field of electrical engineering. Student Branches, through their Counselors and the District Committee on Student Activities are continually vigilant in exposing these groups of students to prominent engineers.

The Student Activities Committee arranges a District Conference each year. Here, full sessions of student technical papers are presented before an audience, AIEE members, and others.

Numerous student prizes and fellowships are given each year to encourage participation in research and technical papers.

There are at the present time 14,000 student members enrolled in 127 Student Branches.

Now these Branch activities are extremely effective training areas for the next higher sphere of activity for the graduated student, which is the AIEE Section.

The AIEE Section

Upon leaving student grade, the younger man is naturally anxious to change his status to corporate membership as an associate. This brings additional privileges of membership along with the opportunities of joining other AIEE members in much broader activities.

Transition from student grade to associate is made as simple as possible so that continuous membership is encouraged.

There are at the present time eighty-one AIEE Sections and forty Subsections throughout this country, Canada, and Mexico. These sections are the local contact which the member has with AIEE activities. It brings the AIEE closer to home. Actually the section is the most effective answer to that age old question, "What do I get for my dues besides a magazine and a chance to attend one or two general meetings per year?" About the limit to the social, technical, and professional activities of the sections is the imaginations of the section officers.

Educational courses are conducted by forty-five of the sections on many engineering subjects. Several of these courses cover subjects which are not to be found in text books. Thus the

student need not cease his formal learning.

The Sections have been extremely active in organizing technical groups on the subjects of electrical engineering. The number of these groups has mushroomed from thirteen in 1942 to one-hundred and nineteen last year. Here the young engineer can keep abreast of technical developments in his own field and others in which he may be interested. The technical group features the practice of informality to draw everyone into the discussion. This is very effective in changing passive attention to active participation. This is precisely what the new engineer needs and, incidentally, is one of the best methods of improving what I call his "professional status."

The Sections encourage technical demonstrations with actual equipments from local industries and inspection trips are extremely popular.

To illustrate the growth and popularity of Section meetings, there has been an increase of almost 300 per cent in the last six years—the figure now standing at about 1400 meetings per year.

These statistics are being offered to you for a purpose; that is, to illustrate the diversification of possibilities for the expansion of professional life and to indicate how these possibilities are spread to as many members as possible.

Interim national affairs becomes the next step after Section activity. Participation in technical meetings in the District and in the four National General Meetings becomes of greater importance than before.

The main technical activity of the organization is vested in thirty-one National Technical Committees, with over one-hundred and twenty-five subcommittees. This activity embraces the efforts of more than two-thousand men geographically distributed all over the country on subjects ranging from basic sciences to the applications of electricity to therapeutics. These committees are the active means by which progress in the art of electrical engineering is made and also made available to the membership. Besides preparing programs for National Meetings, these committees investigate standards, prepare recommended practices and guides, sponsor technical conferences and special publications on their subjects. Their members are reappointed each year by the president, at which time turn-over in membership is a balance between securing the best brains on the subject and the desire to include new blood.

For fifty years the Institute has been a leader in the establishment of standards for electrical equipment. It is a member of the American Standards Association which lends prestige to several of the standards which it establishes. In order to effectively execute standards on all the ramific-

cations of the art, the efforts of many men all over the country are required.

Non-Technical Activities

Through various joint organizations the Institute participates, through its representatives, in a broad range of non-technical activities. Although actual participation is necessarily limited to a few men, the benefits of their efforts are made available to the entire membership at meetings and by publication.

A standing committee of the Institute is charged with responsibility of keeping informed on registration laws for engineers.

Another standing committee of the Institute is charged with the study of safety in connection with electricity and its application.

A committee on research cooperates with departments of National and State Governments in the consideration of research investigations. It assists university staffs in selecting research projects for students.

Economic Status

It is difficult to ignore a discussion such as this one—the subject of the economic status of engineers and collective bargaining. The subjects have become extremely popular in engineering circles in the past few years. The members of AIEE are no more immune to the desire that their National organization do something aggressive on these infectious topics than any other society. No reasonable method has presented itself to date. In the interests of hard-headed practicality, it does not appear on the surface that any voluntary organization comprised of large numbers of employers as well as employees could easily reconcile those viewpoints into anything tangibly useful. Furthermore, there is much good sense, although it is admittedly old-fashioned, in believing that if the technical and professional sides of a man are carefully and actively nurtured, the economic status will individually settle itself. Let us put this on a less controversial basis perhaps, and simply say that a technical society such as the AIEE can devote one-hundred per cent of its time to maintaining and improving the technical welfare of its members without any danger of exhausting the possibility for improvement. This does not mean that discussion of the economic status of engineers is a taboo subject in AIEE circles. Activities along these lines in other quarters are brought to the attention of the members, for their information, in every way possible.

A purely voluntary technical organization draws its strength from the abilities, the calibre, the interests and the loyalties of its members. It can be only what its members individually and in groups make it. All of its policies and procedures must of necessity be based upon membership participation. That mythical personage "The Institute" has the responsibility only of providing continuity in

tradition, and of making available the benefits discovered by as many of its groups as possible to the greatest percentage of its total membership.

It is hoped that this brief summary of the activities of the American Institute of Electrical Engineers has conveyed some idea to you of its efforts to recognize the technical and professional needs of its members. The effectiveness with which this recognition is being converted into fruitful results is a matter in which improvement is constantly being sought.

Merck and Company, through the National Research Council, has awarded ten new fellowships for the academic year 1948-49.

Awards were made to: David H. Brown, Altadena, Calif.; Daniel C. Gajdusek, Yonkers, N. Y.; Malcolm Gordon, Austin, Texas; Caspar W. Hiatt, Mentor, Ohio; Rufus W. Lumray, Jr., Bismark, N. D.; Clement L. Markert, Baltimore, Md.; and Gunther S. Stent, Champaign, Ill. Three fellowships were renewed to: Lorin J. Mullins, Palo Alto, Calif.; Arthur B. Pardee, Pasadena, Calif., and Nevin S. Scrimshaw, Rochester, N. Y.

Research studies include protein physical chemistry, embryonic and cancerous tissues, biophysics, enzymic catalysis, cell growth, and biological reactions.

On the Profession of Chemistry

Karl M. Herstein, F.A.I.C., on behalf of THE AMERICAN INSTITUTE OF CHEMISTS' Student Relations Committee, recently spoke to faculty groups of Columbia Universiy and Brooklyn College and to student groups of Columbia University and Queens College. His topic was "The Profession of Chemistry". He stressed two points: That the professional man needs not only to have technical competence but also to be equipped as a cultured person, to appreciate the general culture of the world and to take part in public activities. To the individual, participation in the activities of professional organizations brings a reward which is many times the effort involved.

Dr Charles L. Thomas, F.A.I.C., research director, Great Lakes Carbon Corporation, Morton Grove, Ill., has been elected chairman of the Chicago Section of the American Chemical Society.

The Professional Activities of the American Chemical Society

Dr. W. A. Mosher

Head, Department of Chemistry, University of Delaware, Newark, Del.

(Presented at the A.I.C. Silver Anniversary Meeting.)

FOR many years the American Chemical Society, now with over 55,000 members, had been solely a scientific society concerned with the advancement of chemistry and with little thought for chemists. This situation was due at least in part to the early domination of the Society by academic interests which had achieved full professional status through professorships rather than from the profession of chemistry.

In the 1930's the prevalence of unemployment among chemists through no fault of their own, declining pay scales, and the threat of unionization stimulated the Society to action. My great teacher, the late Dean Whitmore, was a leader in the movement to get the Society to do something for chemists. That period saw the inauguration of the Committee on Professional and Economic Status under the chairmanship of Dr. L. W. Bass, the Employment Clearing House at the national American Chemical Society meeting, and the program of approving chemistry departments for professional training in chemistry.

At the beginning of this decade, industrial chemists, particularly those interested in professional matters, began to assume more responsibility in the Society's affairs, largely through the local sections. By 1947 the complexion of the Society's Council had changed entirely, and the organization is now entering upon a new phase in its development, which, I believe, will be concerned more and more with professional matters. In 1946, due to the influence of Dr. C. A. Thomas of Monsanto, the Hancock Committee made its study and report on the Society and indicated clearly the feeling of the membership that the Society should do a bigger and better job along professional lines.

We must not minimize the professional value of the publications of the American Chemical Society; neither should they be used as an excuse for professional inactivity. The Committee on Professional Relations and Status, of which I am chairman, was officially appointed a few months ago. It is our responsibility to see to it that professional matters are constantly studied and that appropriate recommendations are presented to the

Council of the Society for action. This Committee takes over, on a somewhat enlarged scale, the activities handled so well in the past under the chairmanships of Doctors Bass and Elder. I have summarized below some of the more important activities in which the Committee in now engaged.

Surveys

The Society has made two of the most comprehensive economic surveys ever attempted by a professional group. A third survey will be undertaken as soon as the general economic situation justifies. Although we have data on the earnings of chemists, we have only general information on what we might call professional treatment. The Committee is now embarking on a survey of "Industrial Practices" to determine, if possible, the general practices toward publication, incentive plans, attendance at meetings, and the like. In cooperation with the Committee on Chemical Education of the Society, we are preparing a survey and report on estimated supply and demand of chemists.

Licensing and Certification

The Chemical Society is now officially on record as being opposed to state licensing or registration of chemists other than those directly connected with public health and safety. The Society's vote on certification was almost evenly divided. Continued study of both of these problems is under way. The Committee is preparing a survey of all existing licensing acts and hopes to obtain valuable assistance from the A.I.C. in this respect.

Education

The Society believes that many of the chemist's professional problems can, from the long-range viewpoint, be definitely improved through proper education. Most college education in chemistry is devoid of instruction in the responsibilities of the chemist to his co-workers, his supervisors, and his profession. In cooperation with the Committee on Education, an attempt is being made to improve this situation largely through the Student Affiliate groups of the Society, which now exist in many universities. The second phase of the education program is directed at better vocational guidance. The problems of the chemical profession are not due to an abundance of excellent chemists. With present university setups the limitation of the number of chemists through proper guidance at the high school and college level appears much more workable than any more drastic form of curtailing production.

I have derived much personal inspiration from contact with members of the Institute who have dedicated their lives to the professional betterment of chemists. Our Committee and the Society will continue to look to them and to your organization for important contributions to professional improvement.

The Engineering Society and Its Young Men

E. Lawrence Chandler

Assistant Secretary, American Society of Civil Engineers

(Presented at the Silver Anniversary Meeting of the A.I.C.)

THE American Society of Civil Engineers does much, and very likely should do more, in the interests of young people. It would be short-sighted, indeed, to do otherwise. Trite as the thought may be, it is inevitable that we older men soon will pass from the scene. Almost before we know it, the matured minds of the profession will be those same youthful ones which we now have the privilege and duty of guiding as best we may. In all our efforts, we are not concerned altogether about what things *we can do for* our students and Junior members. We are much concerned about furnishing opportunities and incentives which will encourage *them to do things for themselves*. Most of what ASCE does can be found in the programs of other societies in somewhat comparable form. As a matter of fact, we are happy to engage in cooperative efforts with other societies.

In citing measures by which ASCE endeavors to meet its responsibilities, let us mention first its participation in the work of the Engineers' Council for Professional Development. It is a joint undertaking, sponsored by eight major engineering societies, including the Engineering Institute of Canada. The main purpose of ECPD is briefly, "The enhancement of the professional status of the engineer . . . ", that being a partial quotation from its own statement of its aims. Among its principal objectives are the selection and guidance of engineering students, and the accrediting of engineering curricula in our institutions of higher learning. Although its field of activity is wide, I mention these two phases as being of specific importance in their effect during the formative stages of the development of our young engineers. ECPD is achieving excellent results.

Our Society is proud of its Student Chapters, of which there are one-hundred and twenty-five distributed all over the country in educational institutions of accredited standing. Each has a "faculty adviser" and also what we call a "contact member" who is appointed from some non-academic field. Although a member of a Student Chapter is not classified as a member of the Society, it is ob-

vious that he is a prospective member. We encourage him to join our ranks at the earliest possible date. As soon as he receives his degree, he becomes eligible for entrance into the Society as a Junior without entrance fee or payment of dues for his first year of membership.

Our student activities are not confined to the individual chapters. It has been found profitable to arrange what we term Student Chapter Conferences, at which members of several chapters within reasonable travel distance assemble in substantial numbers. When circumstances permit, such a conference is arranged in connection with quarterly meetings of the National Society in various part of the country.

Each chapter carries on its own affairs, although directors of the Society, members of the staff, or other interested members of the Society, occasionally are invited to participate in meetings of the chapters and at the conferences.

Considerable sums are included in our annual budgets for all of this activity in recognition of its high value. It is gratifying to meet enthusiastic cooperation on the part of administrators of the colleges and universities. We are happy to stimulate the activities of our Student Chapters. There, while yet undergraduates, members begin associations which will mean much to them in later years. We encourage them to conduct technical meetings and endeavor to instill in their minds an appreciation of proper concepts of professional life. We try to imbue them with the ideal that, to a professionally minded man his profession is not only something from which he can derive a living but that it is something to live for and contribute to.

Benefits of Membership

Naturally, we place before them reasons why they should become members of the Society and take an active part in its affairs. We offer the incentive of personal benefits that come to every man who participates enthusiastically in Society activity. We maintain, as well, that the profession of engineering owes its prestige and its expectation for maintenance of future high standards of usefulness and prosperity—its very existence—to the past continuing efforts of the professional engineering societies. Without the societies there would be no profession worth mention. Evidently, the young men recognize these values, for our Juniors now number nearly one-third of the Society's entire membership.

For some time we have been concerned about providing opportunities for advanced study on the part of ambitious graduates. Our Society now is cooperating with others, under the general auspices of the Engineers' Council for Professional Development, in a study of graduate courses available for employed engineers. In-

formation is being compiled in metropolitan areas of the country as to evening and extension courses leading to advanced degrees from accredited colleges. When the study has been completed, it is proposed that recommendations will be made as to what courses should be added in different areas and as to means by which they can be offered.

Within the last year, our Juniors have been enfranchised and now have the privileges of full corporate members except that they may not become officers in the national society. They are welcome at all meetings of the Society and of its local sections. They are encouraged to serve on committees and participate in programs. However, it is wholly natural that young men have a desire to associate with other young men and, to that end, we find Junior Forums or Junior Branches, in many of our Sections. These Junior groups are pretty nearly autonomous, and function effectively with only such occasional guidance or direction from older members as may be found desirable. They elect their own officers, arrange their own meetings, and carry on their own activities with sympathetic cooperation from the national Society and the local sections. We believe that this program does much to develop self-confidence and poise in the young men and that it furnishes admirable training to fit them for broader responsibilities as they advance in Society affairs.

Services to Employees

From the character of modern civil engineering, it is natural to find that a large majority of our members fall in the category of employees. That being true, a large part of the activity of the Society must be directed toward the welfare of professional employees. Perhaps you know something about the Engineering Societies' Employment Service, Inc. It is a depression-born employment bureau, sponsored by the so-called Founder Societies, with offices in major cities across the country. Although designed primarily to serve members of the several societies, its facilities are available to the public.

As another service of specific interest to employees, our Society has promulgated a recommended schedule of salaries for the various classifications of engineering positions. While we neither have, nor want, any power to inforce such a salary schedule, or to penalize any employer who fails to adhere to it, the mere fact that it emanates from a source with the prestige of ASCE brings it wide recognition as a reasonable standard.

Upon invitation from local governmental bodies in various parts of the country, we have assisted in bringing about needed recasting of job classifications and upward revision of salaries for engineers in public employ. These are substantial, practical, down-to-earth services, not only to engineering employees but in the public interest.

Throughout the last decade our Boards of Direction and committees continuously studied the plight of professional employees under provisions of the Wagner Act, and recommended courses of action for them to follow in their own best interests. Many professional people were forced against their desires into unfortunate affiliations with labor unions. We planned hopefully for the time when opportunity might be presented for amending the labor laws, and were so well prepared for action when that time finally arrived, in 1947, that we were accorded by Engineers Joint Council the position of leadership in a concerted effort on the part of six engineering societies. The current greatly improved status of all professional employees under the terms of the Taft-Hartley Act is due in large part to the constructive work of our Society.

I have stressed a few of the practical phases of our Society activity. Such matters are relatively tangible and easily recognizable. I trust that I will not leave with you an impression that we consider those activities to be of paramount importance. However much emphasis we place upon such practical matters as the getting of jobs and adequate compensation for daily tasks, and however much we realize the importance of helping our young men in gaining satisfactory livelihood, we are convinced that we owe it to them to inculcate and foster in their minds an appropriate evaluation of the broader, overriding duties and obligations of a professional life. We hope that, both by teaching and by precept, we are increasing their realization that true professionalism transcends the mere wrenching of material returns out of life. Professional engineers, or chemists, or those of any other profession, have both opportunity and obligation to contribute of their abilities to the welfare and advancement of mankind. We all should exert our earnest endeavor toward service to our communities, to our nation, and to humanity. Just flowery phrases? I assure you they are not intended as such. Individual talents vary. Genius is rare and elusive. Opportunities for service are not equally available to all. Not everyone can match the accomplishments of an Edison or a Kettering. Nevertheless, each has profound obligation to contribute according to his abilities and opportunities.

Professional Consciousness

We believe that, while we owe it to our students and to our young members to assist them in gaining adequate technical foundation and in obtaining decent material returns for their service in technological fields, we also are under obligation to see that they are equipped for service in broader fields and that they realize, early in life, the full implications attending entrance into a profession. If we

succeed in doing that, we are doing well.

I stated, in the beginning, that our Society is devoting much attention to its young men, and suggested that, perhaps, we ought to be doing more. Perhaps, we all ought to be doing more. I take the liberty of raising some questions, granting readily that I have no complete answers. Many engineers contend that the abilities of technically trained men ought to be more generally utilized in the fields of business and government. That is well but I know of no magic in purely technical education and training that prepares a man adequately to assume responsibility in the business world or equips him to manage affairs of state. Granting that the type of mind which permits a man to be successful in the profession of engineering is one possessed of logic; granting the excellence of a scientific approach to the solution of different problems by assembling basic data and reasoning through from sound foundations to logical conclusions, technical ability *per se* hardly is enough to qualify one for business or government.

Are we affording our students a base broad enough and sound enough on which to erect the sort of superstructure we seem to desire? If, for instance, we expect a man to be qualified for high stations in government, should we not include courses of study in our college curricula which will, at the very least, arouse an awareness of, and a curiosity about, human behavior and forms of government? If a technically trained man is to take part in the administration of government, surely he should search for the reasons why human beings act as they do, individually and in groups. He should know the history of the development and evolution of different forms of government as they have appeared and vanished through the centuries. He should acquire an understanding of the reasons why one type of government has met with measurable success and why another has been found wanting, and so on. Corresponding principles apply in the fields of industry and business.

Interests Should be Broad

Furthermore, whether or not an engineer ever ventures into business or government, may it not be wise to widen the scope of his interests in life? Some familiarity with the broad aspects of human endeavor will go far to make him a better engineer and a more usful citizen.

I am under no illusion that I am presenting new thoughts to you, nor am I intending to imply that the situation is not being faced with frankness by those in position to act. It is encouraging to observe the forward-looking consideration being given to the problems of revising and improving our college curricula by such groups of able men as are found in

the American Society for Engineering Education, the Engineers' Council for Professional Development, and in our separate Engineering Societies. The day may not be far distant when our engineering courses generally will include more cultural and broadening subjects. It may be found desireable, generally to expand our required courses beyond a span of four years in order to earn a degree in engineering. It may become commonplace to find post-graduate and lecture courses available in wide variety as the result of cooperation between our colleges and our technical societies. Already, progress has been made toward such goals and thoughtful consideration is being given to continuing improvement.

We all are trying to afford our young men opportunities for equipping themselves adequately for their professional lives. We believe that we are performing with reasonable credit, but let us be alert and guard against becoming static in such supremely important endeavors.

Soybean Future

Whitney Eastman, president of the Chemical Division of General Mills, predicts that soybeans will continue to lead the nation's oilseeds industry and will expand on a broader scale during the next twenty years. The nation now produces some 200,000 bushels annually.

Gaylor Elected President

Peter J. Gaylor, F.A.I.C., patent attorney of Newark, New Jersey, has been elected president of the New Jersey Patent Law Association to succeed Rudolph J. Jurick. Floyd V. Wemple became president-elect; Warren S. Orton, vice-president; Towson Price, treasurer; and Harry Goldsmith, secretary.

Mr. Gaylor stated that, "In spite of present temporary conditions, New Jersey faces the greatest industrial growth in its history. There is now, more than ever before, the important problem of facilitating a better understanding of patents by the public, and our association is making serious efforts in alleviating this condition."

New Magazine

The American Institute of Physics, 57 East 55th Street, New York 22, N. Y., issued the first number of its new semi-popular magazine, "Physics Today" in May. The new magazine, under the editorship of David A. Katcher, will appear monthly. The feature article in the first issue is "Trends in American Science" by Dr. Vannevar Bush. The subscription is $4 a year.

Dr. William T. Read, F.A.I.C., spoke on "The Research and Development Program of the Army," May 4th, in Baltimore, to members of the Organized Reserve Corps and the National Guard.

The Professional Activities of the American Institute of Chemical Engineers

W. T. Nichols

Westvaco Chemical Corporation, New York N. Y.

(*Presented at the Silver Anniversary Meeting, A.I.C.*)

THE work of the American Institute of Chemical Engineers is important to you, even though you are not a member or a chemical engineer. If you have any real professional reason for attending this meeting of THE AMERICAN INSTITUTE OF CHEMISTS, then somehow the work of A.I.Ch.E. is helping you in your work.

As stated in its Constitution, "The objects of the Institute are advancement of chemical engineering in theory and practice and the maintenance of a high professional standard among its members."

One of the most important statements I can make is that the American Institute of Chemical Engineers sticks very closely to the declared objects, and hence, the official activities of the Institute are entirely concerned with professional matters. We do not try to do good to our members indiscriminately, or to give them help they do not need or want. We do not invade areas which do not pertain to the advancement of chemical engineering theory or practice and the maintenance of a high professional standard among our members. In thus concentrating our activities in professional matters, we have been able to do a forceful job, and I believe a magnificently successful one, in developing our profession to a high state in a relatively short span of years.

You should keep in mind that chemical engineering has been recognized as a distinct and separate branch of engineering for only a comparatively short time. While A.I.Ch.E. was organized forty years ago, the full flowering of professional activity arrived much later than that. The first comprehensive textbook on chemical engineering theory was published about twenty-five years ago. Since that time theory has been developing at an ever-increasing rate, and the chemical engineering literature is now a very large and quite comprehensive one. As in the case of all relatively young organisms, the chances for spectacular growth in our profession are somewhat greater than in the case of professions which have existed for a much longer time. The Institute is, of course, keeping pace in growth

with the profession which it represents.

Membership

In order to understand the program of activities carried on by A.I. Ch.E. you need to know the basis upon which Institute membership is granted. The Constitution currently outlines three classes of membership. Junior membership is open to men less than thirty years of age who have a B.S. degree in chemical engineering from a school of recognized standing, or who have other degrees or even no degree, if they fulfill certain experience requirements, provided any of these men are actively engaged in chemical engineering or allied work. It will thus be seen that opportunity for Junior grade membership is open to a broad group of men connected with work of a chemical nature, and this includes graduate students in chemical engineering. Junior membership may be retained only to age thirty-five.

For Active membership, the situation is quite different. The candidate must be at least thirty years of age, and shall be actively engaged in chemical engineering. Not, "or allied work", mind you, but in chemical engineering. He shall be proficient in chemical engineering, either with respect to various manners of practicing or teaching, or with respect to original research or professional consultation. In addition, depending upon his status with regard to a professional degree, he must have from five years minimum to ten years maximum of experience in the practice of chemical engineering, of which from three years minimum to five years maximum must have been in responsibile charge of important work designing, operating, or developing chemical engineering equipment or processes on an industrial scale, or in responsible charge of important consulting work or of important original published research in chemical engineering. An exception is a candidate who has had chemical engineering training and who is a recognized authority or writer on chemical engineering subjects, having attained eminent standing in the profession.

Associate membership is open to those candidates who are too old for Junior membership, but who are not able to meet all of the requirements for Active membership. Such men might not meet fully the requirements for years of responsible charge of important chemical engineering work, or may not be actively engaged in actual chemical engineering work. This grade of membership is also open to an executive of an enterprise involving to an important degree the practice of chemical engineering who is qualified to take responsible charge of the broader features of the chemical engineering work.

Only Active members may vote on national issues. As a consequence, the affairs of the Institute are regulated

and decided by a body of men who have proven individual ability in the chemical engineering profession. Currently, Institute membership is distributed as follows:

Active	3,156
Associate	385
Junior	4,829
Total	8,370

The professional activities of A.I.Ch.E. are aimed principally at the following fields:

Professional Training

A.I.Ch.E. operates an accrediting system under which a school may qualify for accredited rating by meeting certain stated requirements with respect to teaching staff, equipment, and courses offered. No attempt is made to create a completely standardized curriculum since it appears highly desirable to allow great freedom in the development of individual departments. There is a desire to insure that the real fundamentals of chemical engineering are taught effectively and at a certain level. The accrediting system operates in conjunction with the E.C.P.D. system, but accrediting of chemical engineering curricula is by A.I.Ch.E. rather than by E.C.P.D. A very thorough and very comprehensive job is done by our members who participate in this activity, and when a chemical engineering department earns accreditation by A.I.Ch.E., it is really merited. During the war, circumstances made it impossible to operate the system and the list of accredited schools was frozen as of 1943. I am glad to say that re-inspection has begun and a new accredited list is developing rapidly.

At universities giving the chemical engineering curriculum, student chapters of A.I.Ch.E. exist. Each chapter conducts its own program, aided and abetted by a faculty member acting as Counselor and by a national committee organized for the purpose. These student chapters are most active and supply a favorable climate for the development of student professional activities.

Another activity influencing professional training is the annual A.I. Ch. E., student problem contest. A tough and realistic chemical engineering problem is posed each Spring and each student chapter is entitled to two entries which are judged by the committee formulating the problem. First prize is $100, second prize $50, third prize $25. The first prize is known as the A. McLaren White Award. The solutions are tremendously impressive. This contest and the publication of solutions has done a great deal to lift the general level of excellence of chemical engineering teaching and learning.

Professional Development

As some figures cited earlier will have indicated, the largest class of membership is in the Junior grade, comprising currently about fifty-eight

per cent of the total of all grades. The Institute is very solicitous of the welfare of the members of this large group, and a large part of the professional activities are on behalf of the younger men. Some of the important ones will be mentioned a little later, but I should like to make special mention of professional guidance activities which are currently under the leadership of Dr. Paul Manning, vice-president of International Mineral and Chemical Corporation. A special survey of Junior activities and needs was conducted over a period of several years by Mr. Frank Curtis, vice-president of Monsanto Chemical Company. Through these means, we are learning in what ways we can help the younger members of the Institute to achieve true professional status and to maintain it. A large number of Junior members are used on national committees and are otherwise called upon to assist in conducting the affairs of the Institute.

Cooperation With Other Engineers

We are a part of the Engineering Council for Professional Development and take an active part in its programs as a member society. Since this embraces practically every phase of engineering activity at the professional level, we are interested in and participate in a wide variety of matters pertaining to the improvement of engineering education and practice.

We have representation on a wide variety of Committees whose function is to study, regulate and standardize matters pertaining to engineering practice, such as symbols, data, codes, safety regulations, etc., etc., and much valuable work is done by this means.

A.I.Ch.E. is a participating member of the Engineers Joint Council, made up of the individual American engineering societies. The objects of the Engineers Joint Council are somewhat different from those of the Engineers Council for Professional Development. The latter is essentially a study group for professional development of its individual members and individual engineers generally, while the Joint Council is for taking concerted action where indicated and where joint action by the engineering societies of the United States can be more effective than action by each or some of the societies.

National Committees

National Committees of A.I.Ch.E. deal with such matters as industrial waste disposal, profesional legislation, the patent system, standard symbols and nomenclature for chemical engineering, testing techniques and equipment performance, selective service (when applicable), etc.

Meetings

Until a couple of years ago, the Institute held two national meetings per year, but currently only one national meeting is held each year, at which the annual business meeting takes place. Regional meetings are arranged

for various localities, and attendance at these regional meetings is often as large or almost as large, as at national meetings. This indicates that a much larger number of members and guests are participating in this sort of event, at which a program of professional papers, plant visits, etc., are features, than was possible under the old system.

Publications

Perhaps as important as any activity conducted by A.I.Ch.E. is the publication of professional papers. An extremely effective job is done and it may be said without fear of successful contradiction that the publication of papers on chemical engineering subjects by AI.Ch.E. has been more responsible than any other single factor for the formulation and codifying of chemical engineering theory and practice. A most excellent job has been done, ever since the inception of A.I.Ch.E., by hard working Papers Committees, Program Committees, and Publication Committees, to solicit, critically examine and arrange for publication of a very large number of high class papers on chemical engineering theory and practice. It is well known that, in the absence of proper facilities for publication, professional theory and practice cannot develop and consolidate. For the past year or so, the official publication of A.I. Ch.E. has been *Chemical Engineering Progress*, a full-fledged journal carrying advertising. The majority of each issue is devoted to the publication of professional papers. By this means, A. I.Ch.E. has arranged for the continuation of chemical engineering literature, the expanding scope of which had become increasingly burdensome in a financial sense and in consumption of volunteer efforts by members involved in these activities. *Chemical Engineering Progress* has, of course, a full-time editorial staff and the splendid job begun forty years ago is expanding and improving as time goes on.

Awards

The Institute administers certain awards which are of interest. The William H. Walker Award is normally given each year for the best paper published in the Institute's publication during the three year period preceding the announcement of the award. The Junior Award is on a similar basis but is given only to authors when the only author or all authors of the paper are Junior members.

These awards have done much to encourage high quality in professional papers on chemical engineering subjects.

Local Sections

The foregoing has described professional activities at the national level. An extremely significant activity is that embodied in the work of our twenty-seven local sections. They are scattered over all of the well popu-

lated districts of the United States. Although each local section conforms to certain requirements imposed by A.I.Ch.E. and is aided in certain ways by a national committee organized for this purpose, each section formulates and conducts its programs in accordance with the needs and desires of its own members. In some sections, the accent is heavily on chemical engineering professional matters. In some sections, the program is aimed more at broadening the participants' knowledge of science or lay matters. At some locations, meetings are open, while at others they are for A.I.Ch.E. members only. In any case, our local sections are most active and it has been my experience that meetings of our local sections are more sprightly and less stiff than is usually the case in such affairs. All grades of members can benefit greatly from participation in local section affairs.

A very large number of A.I.Ch.E. members are involved in local section and committee work. At all levels, and in connection with virtually all Institute activities, younger men have ample opportunity to contribute to professional activities and to learn by doing.

Miscellaneous

I have hastily reviewed the highlights of A.I.Ch.E.'s professional activities of the more prominent sort. It would be wrong to omit mention of the host of lesser transactions which go on between members of our Institute and our very efficient secretary, Mr. Stephen L. Tyler, and his staff. Mr. Tyler also correlates with other scientific and professional societies many matters which comprise a substantial effort at improvement of engineering art and practice.

Our organization and our program are in very healthy condition. We are ready to aid any sincere and worthy cause which falls within the limits of our objects and aims. I should like to make it clear in closing that the professional activities of A.I.Ch.E. are not aimed solely at the improvement of status of its members, but are aimed rather at the improvement and strengthening of the profession which the Institute represents.

Kipness with Oxford Products

Dr. Frank Kipnis, formerly with American Home Foods Inc., is now with Oxford Products, Inc., 1814 East 40th Street, Cleveland 3, Ohio.

Annual Reports

Report of the President

1947-1948

THE convening of this twenty-fifth annual meeting of THE AMERICAN INSTITUTE OF CHEMISTS causes us to look backward at the route we have been traveling.

At that time, twenty-five years ago, when the INSTITUTE was formed, there were technical and scientific societies, but none that dealt with the chemist as a professional person. Today the professional aspect of the chemist is widely recognized.

Forty-four charter members of the AIC are still with us. In addition, fifty-five other members who joined in 1923, our founding year, are also on the present roster. We are grateful to these persons for their foresightedness and their continuous support. A recent book is entitled, "Ideas Have Consequences." These founding members and all of us can well be proud of the consequences of the idea of an organization devoted to chemistry as a profession and to chemists who practice the profession.

Though we rejoice in our leadership in bringing the professional aspects of the chemist into general recognition, we feel no complacency. There is still much more to be done not only to improve the professional status of the chemist, but to meet the new problems which face him in this ever-changing world.

We are a small, hard-working group that has sparked and initiated many advancements in the chemist's professional life. But we can use much more assistance to accelerate our progress. The greater the number of qualified chemists who belong to the INSTITUTE, the more it can do. With this thought,we sent out letters this year to our members, asking them to suggest the names of qualified friends who are interested in our professional activities. In addition, we sent each new member, with his certificate, a letter asking him or her to suggest other names.

The response was most encouraging, and as a result, the AIC now has the largest membership in its history, 2227. This is a net gain of 225 members since last year.

A leaflet, prepared this year, presents information and summarizes the activities of the INSTITUTE. It is available to anyone interested and

may be obtained on request to the secretary.

We continued our support of the Municipal Chemists of New York, who finally won a hearing before the Director of the Budget on their petition for salary and grade readjustments. We attended the hearing and confirmed the interest of the AIC in the situation. There seemed to be a lack of understanding on the part of the city officials that chemists are professional men. This demonstrates the continued need of educational work to teach the public the professional importance of chemistry and chemists. It is just one of the things that keep our professional INSTITUTE busy.

A suggestion that chapters should make more contacts with educational institutions in their areas, to inform student chemists about the professional aspects of chemistry, was made by Dr. F. C. Huber. This suggestion was approved by the Council and brought to the attention of the Chapters. Several chapters expressed interest and the New York Chapter undertook a considerable program in this field.

A tentative list of speakers was also prepared and sent to the various Chapters for their assistance in preparing programs.

The objectives of the AIC include two which in brief may be stated as: The AIC shall cooperate with all the agencies serving chemistry and with other societies to make the profession a powerful factor in the advancement of intellectual and material progress in the United States. The Council selected this as one of the objectives to be stressed this year. It was suggested that the chapters hold at least one joint meeting with another society during the season. As a result, several chapters have held joint meetings with other groups, particularly with the ACS. Our national meeting this year is devoted to hearing speakers representing four important societies tell what their societies are doing to advance the professional status of their members, and thus indirectly the status of all professional men. Our Annual Dinner is being held jointly with the New York Section of The American Chemical Society.

Some of the other activities of the Committees and Chapters will be brought to your attention in the Annual Meeting Reports.

The INSTITUTE honors itself this year by presenting its Gold Medal to Dr. Charles Allen Thomas.

As retiring president, I want to express my deep appreciation to all the officers, councilors, committees, chapter officials, and members, who have worked with me for the good of the profession of chemist during the past two years.

—Dr. Foster D. Snell
Retiring President

Report of The Secretary
1947-1948

THE National Council held ten meetings during the year, with an average attendance of fourteen officers and councilors. The following actions upon membership were taken:

Elections

Life	6
Fellows	204
Members	105
Associates	52
	367

Reinstatements

Fellows	7
Associate	1
	8

Resignations

Fellows	84
Members	13
Associates	23
	120

Dropped

Fellows	8
Members	3
Associates	3
	14

Deceased

Life	1
Fellows	13
Members	2
	16

Total Increase of Membership	375
Total Loss	150
Net Increase	225

Actions

Fellows to Life	7
Members to Fellows	10
Associates to Members	5

TOTAL MEMBERSHIP AS OF MAY, 1948

Fellows	1681
Members	274
Associates	224
Life Members	42
Honorary	6
Total	2227

It is with deep regret that we record the following deaths during the year:

E. M. Fleck (F)
Paul Goedrich (F)
C. Elwood Hayes (M)
E. B. Henderson (F)
Treat B. Johnson (F. Past President)
Lester Kirschbraun (F)
Herbert R. Moody (Life)
Howard S. Neiman (F. Hon. Secretary)
Robert T. Northcutt (F)

Raymond R. Ridgway (F)
Clark S. Robinson (F)
Glen M. Smyth (F)
John Traquair (F)
John H. Vail (M)
Frank C. Whitmore (F)

It is gratifying to report that through the cooperation of the membership this year, we have welcomed 375 new members into the AIC, representing a net increase of membership of eleven per cent, the largest gain recorded in recent years. The result of your fine cooperation is most encouraging for our accelerated growth in the immediate future.

Among the projects stressed this year was that of bringing the professional side of chemistry to the attention of younger chemists. The Chicago and New York Chapters both made AIC speakers available to colleges in their areas. President Snell, in a letter to the membership, encouraged the suggesting of the names of younger chemists who meet the qualifications of our Member and Associate grades.

Consistent with our desire to let the membership know that the National Council is receptive to the wishes of the membership and is accessible to each individual member, we began listing the Councilors alphabetically, each name followed by the name of the Chapter which he represents, or by the words " at large" if he is elected by the membership. There seemed to be some misunderstanding when part of the councilors were listed under the heading of "Chapter Representatives"—a few persons assumed that these representatives were not Councilors, and did not have the full power of councilors.

A Committee, under the chairmanship of Dr. Donald B. Keyes, prepared a list of speakers which was sent to the chairman of the various Chapters to assist them in planning programs.

The activities of many of the Chapters have been particularly constructive this year, and the minutes of these meetings were sent in by the Chapter reporters for publication in THE CHEMIST. Those who do not send in reports regularly are especially urged to do so because what interests chemists in one area is of interest to all.

At the most recent meeting of the Council, the chemists in the Northern Ohio Chapter petitioned the Council to dissolve this Chapter (as did, previously, those of the Miami Valley Chapter of Ohio) and to give them a Charter on a statewide basis, to cover a Chapter to be known as the "Ohio Chapter." It was the consensus of the Council that such a statewide Chapter should be tried out in the Ohio area.

Many inquiries concerning professional matters were answered or referred to sources of information. The secretarial correspondence was heavy during the year, which attests to the

greater interest in these professional matters.

The AIC was asked to send representatives to many college commencements, association, and organization meetings, etc., and many of our members accepted these appointments as representatives even where they were personally inconvenienced.

A booklet was prepared setting forth some of the activities of the AIC for the use of members who wish to acquaint their friends with our objectives. It is available on request.

Other activities of the AIC are given in the reports of the President, the Chapters, and the Committees, for this Silver Anniversary Meeting.

It is interesting to note that the INSTITUTE was inaugurated with eighty-one Charter members. Of this number, forty-four are still with us.

It is especially gratifying to see how the AIC has grown in prestige and service during the past quarter of a century. You, its members, are the vital force which will make it greater and more effective during the coming year.

Credit and appreciation go to the many members who, during the present season, have given of their personal time and effort to further our work.

—Dr. Lloyd Van Doren,
Secretary.

WAA Cuts Staff

The War Assets Administration announces that it is making drastic cuts in its staff, and it is anxious to help place these persons in positions commensurate with their ability. Stating that, "The largest merchandising house in the world will soon have successfully sold itself out of business," the administration emphasizes that, "Many of these men and women who have completed their mission for Uncle Sam are specialists with technical experience in many different fields gained in private industry before the war." Information concerning qualifications of these persons may be secured from the Chief of the Personnel Division, War Assets Administration, Region 2, Box 216, Wall St. Station, New York.

Riener with Industrial Rayon

Thomas W. Riener, A.A.I.C., formerly with the Resinous Products and Chemical Company, Philadelphia Pa., is now with Industrial Rayon Corporation, Cleveland, Ohio.

Chemist Available

Paper Research or Control Chemical Engineer. F.A.I.C., T.A.P.P.I., M.S., M.I.T. Considerable experience in paper production and control. Research experience in sizing. Would like position in chemical company manufacturing paper chemicals or in large paper mill. No geographical preference. Please reply to BOX 70, THE CHEMIST.

COUNCIL

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President, Lawrence H. Flett
Vice-president, Raymond E. Kirk
Secretary, Lloyd Van Doren
Treasurer, Frederick A. Hessel

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M. J. Bahnsen, *Ohio Chapter*
Charles L. Thomas, *Chicago Chapter*
Gustav Egloff, *Past President*
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Donald B. Keyes, *At-Large*
Harold A. Levey, *Louisiana Chapter*
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Karl M. Herstein, *New York Chapter*
E. H. Northey, *At-Large*
Lester F. Hoyt, *Niagara Chapter*
Donald Price, *At-Large*
H. W. MacKinney, *New Jersey Chapter*
Norman A. Shepard, *At-Large*
Charles W. Rivise, *Pennsylvania Chapter*
Maurice Siegel, *Baltimore Chapter*
Foster D. Snell, *Past President*
W. D. Turner, *At-Large*
James R. Withrow, *At-Large*
Lincoln T. Work, *At-Large*

May Meeting

The 247th meeting of the National Council was held on May 7, 1948, at 12 noon at the Waldorf Astoria Hotel, New York, N. Y. President, Foster D. Snell, presided. The following officers and councilors were present: Gustav Egloff, Eduard Farber, Harry L. Fisher, Lawrence H. Flett, Frederick A. Hessel, Donald B. Keyes, Raymond E. Kirk, Joseph J. Mattiello, J. M. McIlvain, J. J. Miskel, E. H. Northey, H. M. Olson, Rev. J. J. Pallace, Donald Price, G. L. Royer, Foster D. Snell, W. D. Turner, and Lloyd Van Doren. C. P. Neidig, A. J. Nydick and V. F. Kimball were present.

The auditor's report was accepted. The minutes of the previous meeting were accepted.

President Snell reported that membership activities during the year had been unusually successful and that a total of 375 new members had been elected since April 30, 1947.

A letter was read from Dr. H. R. McGraw, Treasurer of the Western Pennsylvania Chapter.

A letter was read from A. J. Nydick covering the situation of the Clinical Laboratories in Ohio. The Committee on Public Health, of which Mr. A. J. Nydick is chairman, reported that the professional status of chemists in Ohio would be gravely affected by the promulgation of proposed regulations of the Department of Health of Ohio requiring that the director of a clinical laboratory be the holder of the degree of Doctor of Medicine. Upon motion made, seconded, and carried, the Council instructed the Institute's representative on the subject, through the Committee on Public Health, to act for us at any meetings on this subject.

Upon motion made, seconded, and carried, a vote of thanks was given to Dr. Joseph J. Mattiello, for the work he had done as Chairman on Arrangements for the Silver Anniversary meeting.

The matter of the National Science Foundation was discussed briefly. The committee on this subject had passed resolutions last year which appeared in the August 1947, issue of THE CHEMIST.

Rev. Pallace, secretary of the Niagara Chapter, reported briefly on activities in that area.

Dr. Eduard Farber, chairman of the Washington Chapter reported for his Chapter.

Mr. H. M. Olson, representing the newly formed Ohio Chapter, requested a list of names and addresses of all members of the Institute in the State of Ohio.

Upon motion by Dr. Harry Fisher, a vote of thanks was given to the officers of the Institute who have carried us through this year.

Because of the brief time alloted to the Council at this meeting, applications from new members were referred to the next meeting of the Council, to be held June 15th.

There being no further business, adjournment was taken.

Lieber Joins Staff of Illinois Institute of Technology

Dr. Eugene Lieber, F.A.I.C., was named assistant professor of chemistry at Illinois Institute of Technology, to take effect September first. At present, he is senior research chemist at Armour & Company. He is author or co-author of eighteen technical publications and the holder of eighty-two patents. He has taught organic and physical chemistry at Brooklyn Polytechnic Institute and was research chemist of the Standard Oil Company of New Jersey at the Bayonne paraflow laboratory. He received the Ph. D. degree in 1937 from Brooklyn Polytechnic Institute.

For Your Library

The Chemistry of Organic Compounds

By James Bryant Conant (President, Harvard University; formerly Shelton Emery Professor of Organic Chemistry) and Albert Harold Blatt, Associate Professor of Chemistry, Queens College. 3rd edition; The Macmillan Company, New York, 1947. 665 *pp.* $5.00.

As an elementary textbook in organic chemistry, this book is to be highly recommended.

The material is well and clearly presented. Besides explaining the basic physical chemical principle underlying the chemical equilibria in such a way as to be easily understood even by beginners, the authors have briefly discussed recent industrial developments. This reviewer is only sorry that in this connection no mention was made of Reppes work.

—Dr. Frederick A. Hessel, F.A.I.C.

Corrosion Handbook

Edited by Herbert H. Uhlig. John Wiley and Sons Inc. 1188 *pp.* 9¼" x6¼." *Price* $12.00

The Corrosion Division of the Electrochemical Society has collected its information in this *Corrosion Handbook*. The difficult and baffling subject is handled in the form of topics by specialists. The information is up to date.

The book is divided into sections on theory, data on the corrosion of metals and alloys, special environmental action, high temperature corrosion and the important counterphase of anti-corrosion and resistance. Corrosion testing and illustrations of typical forms of corrosion and miscellaneous information close the book.

This handbook is valuable to all technical men.

—Dr. John A. Steffens, F.A.I.C.

Chemical and Technical Stenography

(*Gregg Method*). *By James Kanegis, P. O. Box* 1121, *Washington* 13, *D. C.,* 387 *pp.* 5½" x 8½" $5.00.

There has long been a need for this book, but strangely enough no publisher has previously had the foresight to supply it.

The author is chemical and metallurgical technologist of the U. S. Department of Commerce, and he was formerly assistant metallurgist of the National Bureau of Standards. He has prepared this book for those who have studied the basic principles of Gregg stenography but who have not studied chemistry or metallurgy. The subjects are well chosen, simply explained, and deftly designed for use in practice dictation. Chapters cover:

Mathematical Introduction, Chemical Introduction, Metallurgical Introduction, The Elements, Chemical Nomenclature, Terminology and Abbreviation, Formulas and Equations, Abbreviations and Abbreviating Principles, Special Phrasing Methods, Classified Words and Phrases, Word Vocabulary, Phrase Vocabulary, General Vocabulary Drill.

Chemists who are in executive and administrative positions should supply this book to each member of the secretarial staff. The increase in staff efficiency will cushion the shock of discovering that good technical secretaries are always in demand at salaries higher than normal.

—V. F. K.

Nomography

By A. S. Levens. John Wiley and Sons. 176 *pp.* 6¼" x 9½," $3.00

The simplicity in using alignment charts has won much favor in technology. Such charts are especially advantageous to non-technical personnel who can employ them with confidence. Their beauty in expressing the relationships between many variables, with complicated formulae pre-solved, is a delight.

The construction of such charts for practical use is well explained, but the reader should not be confused by the symbolic flourishes that are so dear to the heart of the mathematician. The construction is really quite easy and very useful.

—Dr. John A. Steffens, F.A.I.C.

Recommended for Professional Reading

Dr. Gustav Egloff, F.A.I.C. recommends for professional reading:

"What Industry Expects of a University," by Roy C. Newton, vice-president in charge of research, Swift and Company, Chicago. Reprint from *Chemical and Engineering News,* February 9, 1948.

"What is Government's Role in Scientific Research?" Reprint of a radio discussion on Station WGN, Northwestern University broadcast "The Reviewing Stand." March 7, 1948. Includes discussion by Gustav Egloff, Henry T. Heald, John R. Steelman, and Robert E. Wilson.

"Petrochemicals," by Dr. Gustav Egloff. Reprint from *The Oil and Gas Journal,* April 1, 1948.

"Patents and University Research," by Dr. Archie M. Palmer, director, Patent Policy Survey, National Research Council. Reprint from *The Scientific Monthly,* Volume LXVI, No. 2.

Booklets

"Elsevier's Scientific Publications. 1948." Catalog available from Elsevier Publishing Company, Inc., 215 Fourth Avenue, New York 3, N. Y.

"Catalogue 131." A second clearance catalogue of books on art, medicine, science, 16th Century printing, Italian literature, etc. Price 2D Available from Davis and Orioli, 56, Maddox Street, London, W. I., England.

"Hercules Products," a 20-page brochure which classifies the company's chemicals, about 100 in number by family groups. Available from Hercules Powder Company, Wilmington, Delaware.

"Benzol—How It's Chlorinated." Four page reprint, available from Glyco Products Co., Inc., 26 Court Street Brooklyn 2, New York, and Natrium, West Virginia.

"Industrial Chemicals." Bulletin No. 18. Describes translations of research records, etc., from the files of I. G. Farben and Degussa pertaining to industrial chemicals. Request it from Research Information Service, 509 Fifth Avenue, New York 17, N. Y.

"Farrand Photoelectric Fluorometer," Description of new Fluorometer. Request bulletin 803 from Farrand Optical Co., Inc., New York 66, N. Y.

"Permel Resin, Durable Repellent Finish." Textile Finishing Bulletin 120. American Cyanamid Company, Textile Resin Department, Bound Brook, New Jersey.

"Program of Preparedness In Rubber," by John L. Collyer, president, B. F. Goodrich Company. Recommendations to the U.S. Government in the interest of military security: The eleventh in the series of rubber studies made by the B. F. Goodrich Company, Akron, Ohio.

" 'Magniflake' Aluminum and Bronze Powder and Paste", descriptive leaflet. Magna Manufacturing Company Inc., 444 Madison Avenue, New York 22, N. Y.

"Aerotex Softener H". Textile Finishing Bulletin 111, Textile Resin Department, American Cyanamid Company, Bound Brook, N. J.

"New Rosinger Magnetic Stirrer", Description available on request to Ivan Sorvall, 210 Fifth Avenue, New York 10, N. Y.

"Absolute and Differential Manometer." "Hydrion pH Test Papers." Descriptive leaflets. The Emil Greiner Company, 161 Sixth Avenue, New York 13, New York.

"Laboratory Stirrers for the Modern Laboratory." Leaflet available from Palo-Meyers, Inc., 81 Reade Street, New York 7, N. Y.

"Eastern Midget Pumps and Laboratory Stirrers", illustrated leaflet distributed by The Emil Greiner York 13, N. Y.

Condensates

Ed. F. Degering, F.A.I.C.

One of the most irresistable things that enters our lives is a smile. It penetrates deep into the soul of those we meet. It gives courage to those in despair, helps to lighten a heavy heart. It will take you further in life and break down more obstacles than anything else you can do. It will make you an outstanding personality, and a leader of men. Smile as you journey on through life.

—Lions Roar,
Gulf Beach Lions Club, Fla.

Folic acid, according to Dr. Tom D. Spies of the University of Cincinnati, is a remedy for macrocytic anemia.

Cowhands, particularly on the ranges of the west and southwest, are beginning to rope with nylon, now being fabricated into superior lariats.

Formalin is one of the oldest and best of the chemical treatments for disease and insect control, but is not highly effective as a weed killer.

The French have a saying that science knows no country.

—Sir Arthur Fleming

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